

TRANSFORMING PUBLIC SERVICE DELIVERY IN MEDAN: AN SEM-PLS APPROACH TO DIGITAL GOVERNANCE AND CITIZENS SATISFACTION

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Abstract

The purpose of this study is to find out and analyze the extent to which accountability and information disclosure affect public satisfaction with Government services through digital governance as an intervening variable. The subject of this study is the population of Medan City, where the variables in this study are independent variables, namely accountability and information disclosure, dependent variables, namely community satisfaction variables and intervening variables are digital governance variables. The results of data analysis were carried out by SEM analysis using SMART PLS 4.0 software. The data collection technique with questionnaires, as well as observation. The research method uses a quantitative descriptive method of data analysis using *the structural equation model* (SEM) method, where the results of data processing using the SEM method are carried out with the PLS 4.0 application. From the results of the study, the existing conclusion, namely that accountability and information disclosure partially affect community satisfaction in Medan City and affect digital governance. Simultaneously, accountability and information disclosure affect community satisfaction in Medan City through digital governance variables as intervening variables. The more accountability and information disclosure regarding services increases, the clearer it will provide opportunities to create good digital governance and have an impact on increasing people's satisfaction with the public services provided.

Keywords: Digital Governance, Public Service Transformation, Accountability, Information Disclosure, Community Satisfaction.

1. INTRODUCTION

Public service in Indonesia is something that must be done by the Government, where this form of public service is a dynamic that must create a consistent work in satisfying the needs and desires of the community, where public service must be based on sincerity and devotion in order to create a feeling to always serve the community appropriately and effectively (Scupola, Ada and Mergel, 2022). Good public services often also have an important role in increasing public satisfaction with the services provided, where public services such as health, education, and basic infrastructure ensure that the basic needs of the community are met. This includes accessible healthcare, quality education, and infrastructure such as roads, clean water, and electricity (Strap, 2023). By providing quality services, the government can improve the quality of life of the community. For example, access to good education can open up better economic opportunities, and good health services can improve life expectancy and general well-being (Zuiderwijk, Anneke, Chen, Yu Che and Salem, 2021).

Public services play a role in reducing social disparities by ensuring that all levels of society, especially the underprivileged, have equal access to basic services. This includes social assistance programs and subsidy services. Public services such as the police, fire brigade, and other emergency services are important to maintain public safety and order. This ensures that people can live in a safe and secure environment (Ly, Bora and Ly, 2023). Good infrastructure and efficient public services

can create an environment conducive to economic growth. For example, good transportation infrastructure can support business and trade activities. This infrastructure is related to the fulfillment of accountability and information disclosure, where most of the work is still manual is very unaccountable and transparent, as well as the lack of public information disclosure (Budiarmo, 2021).

To overcome such a thing now, a teosbor is needed that can accelerate services and create accountability, where this accountability is very necessary so that later the services provided can be maximized properly and can touch the problems that exist in the community (Alexandra, Carla, 2023). Accountability in public services will be able to create a good form of service, which should be able to describe in detail how the service process is carried out properly and responsibly (Pontones-Rosa, Carolina, Pérez-Morote, Rosario and Santos-Peñalver, 2021). Accountability in public service is a very important concept to ensure that government agencies and public service providers are accountable for their actions and decisions to society. Public service institutions or organizations must be transparent in conveying information about policies, processes, and the use of resources. It allows the public to understand how decisions are made and how public funds are used (Cordero, Carolyn J., 2023).

Leaders and public employees must be held accountable for their actions. They must make decisions based on the interests of the community and account for the results of those decisions. □ Accountability also involves the active participation of the community in the decision-making process. The public must have adequate access to information and opportunities to voice their opinions (Chung, Choong Sik, Choi, Hanbyul and Cho, 2022). Public services must be managed fairly and equally, without discrimination based on social, economic, or cultural status. All individuals and groups must have equal access to the services provided. To ensure accountability, an independent and effective oversight mechanism must exist. This includes audits, performance evaluations, and supervisory bodies that monitor and evaluate the performance of public service institutions (Li, Dongxue, Zhao & Wang, 2022).

It is important to have clear sanctions for ethical or legal violations in public services, as well as mechanisms to remedy damage caused by the incompetence or negligence of service agencies. Public service institutions must measure and report their performance regularly to the public. It includes achievement objectives, performance indicators, and evaluation of outcome achievements. By maintaining strong accountability in public services, the government can build public trust, improve service efficiency, and ensure that people's needs are met appropriately and fairly (Over the Cross, Dragana, 2023). Accountability in public services leads to information disclosure, where the more open information about public service programs from the Government, the greater the opportunity for the public to be able to understand well the concept of the service programs provided, the procedures taken, and the procedures that must be carried out by the community in undergoing the service programs that will be implemented (Kornysheva, Elena, Boutal, Laurent and Benramdane, 2023). Information disclosure in public services is a fundamental principle to ensure transparency, accountability, and effective public participation. The public has the right to access information about policies, decision-making processes, budgets, and performance of public service institutions. This includes public documents, data, reports, and other relevant information (Hirschhorn, Fabio, 2019).

Public service agencies must proactively publish information about how they operate, including the organizational structure, the functions of each unit, and the procedures used in providing services to the community. Information disclosure is obtained from the digitalization development process, where openness and accountability are obtained from the digitalization governance process that serves well and tends to be able to provide papacy to the community for the services provided (Ullah, Fahim, 2021). The governance presented must contain information on the form of service in the application, as well as other conveniences that support the service will be better, and the ability of the serving resources to provide information and assistance quickly, precisely, efficiently and openly will be increased, so that if there is something that is covered up, it will have an impact on decreasing public trust, so that it will make the community satisfied with the service through the management of service information in the application, so that it will foster excessive trust from the people (Simmonds, Hamish, 2021). The Medan City Government creates services that are partly digital and some still use manual equipment, where digital governance that is less open in providing information, and not accountable tends to harm the people of Medan City of 2,494,512 people, where the form of digital governance that is still not able to provide accountable services and information disclosure that is less informative makes the Medan City Government unable to improve the quality of services by well, so that it has an impact on the decline of

Problem Formulation

The formulation of the problem that emerged from this study is how the variables of accountability and information disclosure affect public satisfaction with Government services through digital governance as an intervening variable.

Research Objectives

The purpose of this study is to find out and analyze the extent to which accountability and information disclosure affect public satisfaction with Government services through digital governance as an intervening variable.

Originality of Research

The subject of this study is the population of Medan City, where the variables in this study are independent variables, namely accountability and information disclosure, dependent variables, namely community satisfaction variables and intervening variables are digital governance variables. The results of data analysis were carried out by SEM analysis using SMART PLS 4.0 software. The data collection technique with questionnaires, as well as observation.

2. LITERATURE REVIEW

Accountability

Accountability is a principle or concept that indicates that an individual, organization, or institution has a responsibility to be held accountable for their actions to other parties or society in general. Specifically in the context of public service, accountability refers to the obligation of leaders and public service providers to explain and take responsibility for their decisions and actions to the public served (Zhang, Jun and Mora, 2023). By maintaining good accountability, public services can function more efficiently, build public trust, and ensure that the interests of the community are prioritized in every decision made (Song, Many, 2023).

The accountability indicators are:

1. Transparency
2. Public participation
3. Responsibility
4. Supervision (Kosec, Katrina and Wantchekon, 2020)

Disclosure of Information

Information disclosure refers to the principle or circumstance in which relevant, related, and important information is publicly available and easily accessible to the general public (Sucupira Furtado, Lara, 2023). Information disclosure is not only key to building public trust in the government and public institutions, but it is also a prerequisite for good governance and healthy democracy (Cry, Luca, 2020) Indicators of information disclosure are:

1. Transparency
2. Accessibility
3. Accountability
4. Public participation (Hanisch, Marvin, 2023)

Community Satisfaction

Community satisfaction is a measure of the extent to which public services meet or exceed the expectations of the people who receive the service. The level of public satisfaction is an important indicator in assessing the effectiveness and quality of public services provided by the government or related institutions (Kuziemski, Maciej and Misuraca, 2020). To measure community satisfaction, a variety of methods can be used, including customer satisfaction surveys, interviews and group discussions, analysis of complaints and suggestions, and community satisfaction indices (Hamzah, Muhammad Iskandar, 2023). The indicators of the papacy of the community are:

1. Accountability
2. Satisfying service
3. Increased public trust (Lafioune, Nawel, 2023)

Digital Governance

Digital governance is a framework that governs the use of digital technology in an organization to ensure that it is used effectively, efficiently, and securely. It includes policies, procedures, and structures that manage digital data, technology, and processes to achieve organizational goals (Zu, Qi, 2023). Effective digital governance allows organizations to make the most of technology, while managing risk and ensuring that all digital activities are conducted ethically and in accordance with applicable regulations (El-Haddadeh, Ramzi, 2019). Digital governance indicators are:

1. Policies and procedures
2. Data management
3. Transparent service (Rantala, Salla, 2020).

Conceptual Framework

The conceptual framework of the research is:

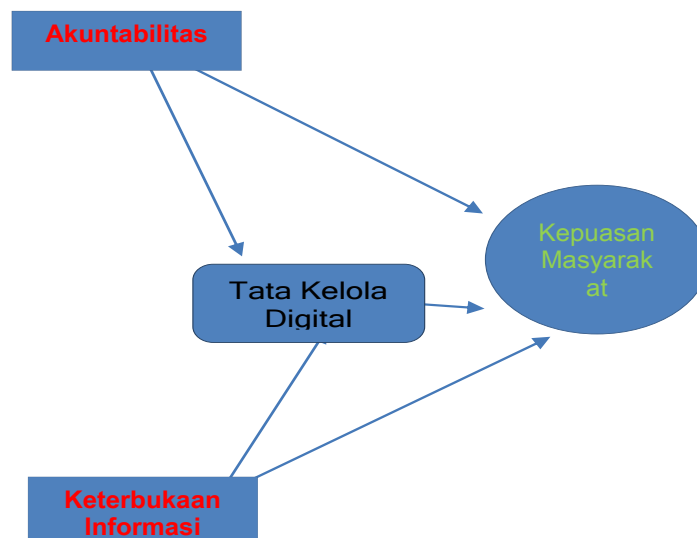


Figure 1: Conceptual Framework

Hypothesis

1. Accountability affects the satisfaction of the people of Medan City
2. Information disclosure affects the satisfaction of the people of Medan City
3. Accountability affects digital governance
4. Information disclosure affects digital governance
5. Digital governance affects the satisfaction of the people of Medan City
6. Accountability affects the satisfaction of the people of Medan City through digital governance as an intervening variable
7. Information disclosure affects the satisfaction of the people of Medan City through digital governance as an intervening variable.

3. MATERIAL AND METHODS

This research method was carried out using a quantitative descriptive method using method analysis *Structural Equation Model* (SEM), where according to (Nookhao, Saowakhon and Kiattisin, 2023) SEM analysis is a statistical method used to explain and describe the influence of existing variables. The population in this study is 2,494,512 residents of Medan City in 2023, where the sampling method is carried out using the *accidental sampling*, which according to (Nookhao, Saowakhon and Kiattisin, 2023) sampling method using *accidental sampling* is a sampling method in which the sample is taken at the research object.

The number of samples taken can be done using the slovin formula as follows:

$n = N / (1 + Ne^2) = 2,494,512 / (1 + 2,494,512 \times 0.1^2) = 99.99 = 100$ people of Medan City consume renewable energy products.

4. RESULTS AND DISCUSSION

Research Results

The output of the SEM test can be described through the following *Bootstrapping* diagram:

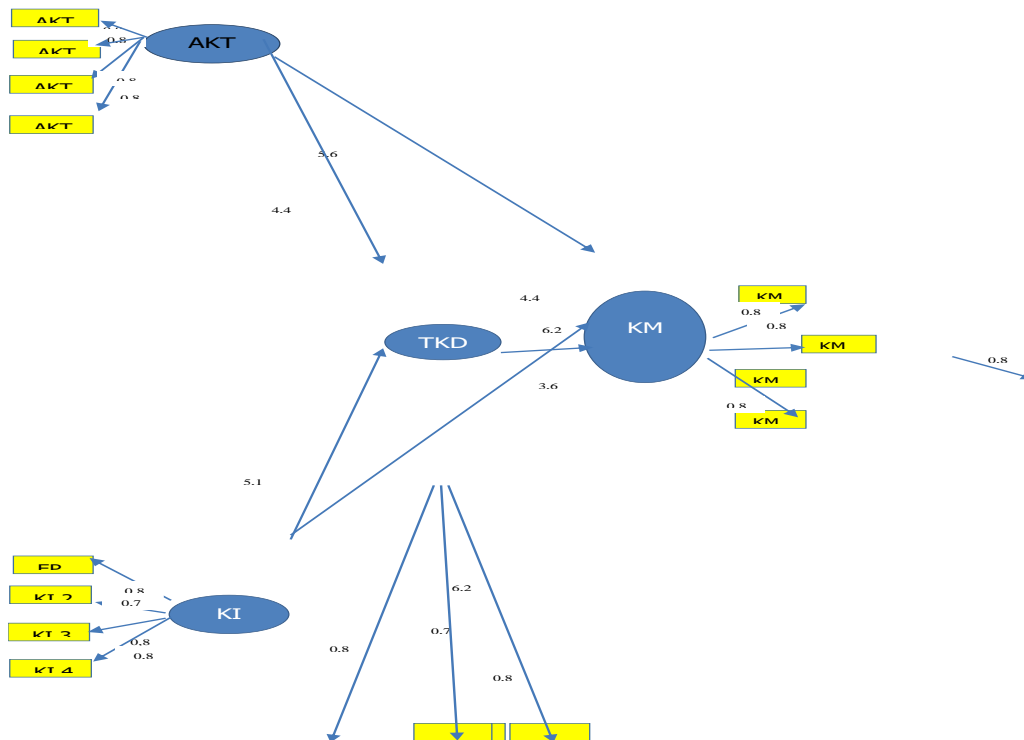


Figure 2: Bootstrapping Diagram

Convergent Validity Analysis

(Nookhao, Saowakhon and Kiattisin, 2023) states that the analysis *convergent validity* is one that describes the validity of the data from an existing variable. The test results *convergent validity* in this study, it is as follows:

Table 1: Convergent Validity Test

Variable	Indicator	Outer Loading
Accountability (X1)	ACT 1	0,852
	ACT 2	0,862
	ACT 3	0,882
	ACT 4	0,855
Information Disclosure (x2)	FOR 1	0,867
	FOR 2	0,758
	FOR 3	0,833
	FOR 4	0,881
Community Satisfaction (Y)	KM 1	0,844
	KM 2	0,851
	KM 3	0,870
	KM 4	0,866
Digital Governance (Z)	TKD 1	0,886
	TKD 2	0,767
	TKD 3	0,825

Source: Results of Data Processing with PLS 3.0, 2024

The table above states that the data of each existing construct variable can be said to be valid and very feasible to be analyzed through further data processing.

Analysis of Average Variant Extracted (AVE)

(Nookhao, Saowakhon and Kiattisin, 2023) stated that the AVE test is one of the tests aimed at determining whether the data has been assessed as appropriate and valid or not. The test results *Average Variant Extracted (AVE)* is in the following table:

Table 2: AVE Test

Variable	AVE
Accountability (X1)	0,835
Information Disclosure (x2)	0,871
Community Satisfaction (Y)	0,841
Digital Governance (Z)	0,860

Source: Data Processing Results with PLS 4.0, 2024

The table above describes the *Average Variant Extracted (AVE)* value greater than 0.5 which means that the construction equation model is suitable for analysis through further data processing.

Composite Reliability Analysis

According to (Nookhao, Saowakhon and Kiattisin, 2023) Testing *Composite Reliability* It is an analysis to explain whether the data is reliable or not. This can be seen in the following table:

Table 3: Composite Reliability Test

Variable	Composite Reliability
Accountability (X1)	0,886
Information Disclosure (x2)	0,821
Community Satisfaction (Y)	0,871
Digital Governance (Z)	0,852

Source: Data Processing Results with PLS 4.0, 2024

The table above states that the *composite reliability* value is greater than 0.6, where the existing data can be said to be reliable or suitable.

Discriminant Validity Analysis

In confirmatory factor analysis (CFA) or structural equation modeling (SEM), the analysis of the validity of discrimination is how much the relationship between construct variables occurs. The results of the *Discriminant Validity* analysis can be seen in the following Table 5:

Table 5: Discriminant Validity Analysis

	Community Satisfaction Moderating Effect 1	Community Satisfaction Moderating Effect 2	Community Satisfaction Moderating Effect 3	Community Satisfaction Moderating Effect 4
Accountability	.757	1.000	.757	.627
Disclosure of Information	.664	.737	1.000	.727
Community Satisfaction	.757	.786	.837	1.000
Digital Governance	1.000	.747	.667	.637

Source: PLS Data Processing Results, 2023

Based on the table above, it can be seen that the existing AVE values are in accordance with and meet *the Discriminant Validity* comprehensively and comprehensively.

Path Coefficient Testing

As for the *path coefficient test*, it can be found through the following table:

Table 6: R Square Test

Variable	R Square
Accountability (X1)	0,886
Information Disclosure (x2)	0,853
Community Satisfaction (Y)	0,862
Digital Governance (Z)	0,857

Source: Data Processing Results With PLS 3.0, 2023

From the existing table, the R Square variable of improving the quality of public satisfaction can be explained by the variables of accountability, information disclosure and digital governance of 86.2%, while the remaining 13.8% can be explained by other variables that are not in the study.

Hypothesis Test

The results of hypothesis testing can be seen through the following table:

Table 7: Hypothesis Test

Hypothesis	Influence	T-Statistics	P-Value	Result
H1	Accountability to community satisfaction	5,632	0,000	Accepted
H2	Information disclosure to public satisfaction	6,254	0,003	Accepted
H3	Accountability to digital governance	4,524	0,002	Accepted
H4	Information disclosure on digital governance	5.143	0,000	Accepted
H5	Digital governance on the satisfaction of the people of Medan City	6,210	0,000	Accepted
H9	Accountability for the satisfaction of the people of Medan City through digital governance as an intervening variable	4,424	0,002	Accepted
H10	Information disclosure to the satisfaction of the people of Medan City through digital governance as an intervening variable	3,671	0,000	Accepted

Source: Data Processing Results With PLS 3.0, 2023

According to the table above, it can be concluded that partially the variables of accountability and information disclosure affect community satisfaction in Medan City and affect digital governance. Simultaneously, accountability and information disclosure affect community satisfaction in Medan City through digital governance variables as intervening variables.

Discussion

Accountability Affects the Satisfaction of the People of Medan City

The results of the study stated that Accountability affect the satisfaction of the people of Medan City. This is in accordance with research (Cao, Shoufeng, 2022) which states that the accountability of each existing service will tend to increase public satisfaction with existing services.

Information Disclosure Affects the Satisfaction of the People of Medan City

According to the results of the existing research Information Disclosure affect the satisfaction of the people of Medan City. This is in accordance with research (Nguyen, Thi Minh Phuong and Davidson, 2023) which states that the more open the information of a service, the more open it is to serve the Government and make the public satisfied with the services provided.

Accountability Affects Digital Governance

According to the results of the existing research Accountability affecting digital governance. This is in accordance with research (Sounion, Varsolo, 2023) which states that the accountability possessed by digital services makes digital governance in public services better and better, the achievement of its performance in serving the community.

Information Disclosure Affects Digital Governance

According to the results of existing research, the variable of information disclosure affects Digital Governance. This is in line with research (Slotsvik, Tone Njølstad, Gould, Kenneth Arne Pettersen and Stene, 2023) which states that information disclosure indicates that it will create openness regarding the form of services in digital applications that make the community well served.

Digital Governance Affects the Satisfaction of the People of Medan City

The results of the study stated that digital governance has an effect on the satisfaction of the people of Medan City. This is in accordance with research (Ristikari, Tiina and Virtanen, 2023) which explains that increasing services through digitalization system governance will tend to increase public satisfaction with existing services.

Accountability Affects the Satisfaction of the People of Medan City through Digital Governance as an Intervening Variable

The results of the study explain that the variable Accountability affect the satisfaction of the people of Medan City through digital governance as an intervening variable. This is in accordance with research (Iran, Zahir, 2023) who explained that the better the accountability of existing services, the better the governance of digital services will be and make people tend to be satisfied with existing services because they are well served.

Information Disclosure Affects the Satisfaction of the People of Medan City through Digital Governance as an Intervening Variable

The results of the study explain that the variable Information Disclosure affect the satisfaction of the people of Medan City through digital governance as an intervening variable. This is in accordance with research (Cornips, Leila, 2023) which states that the more open information about public services, the more governance regarding

digitalization will be carried out and public satisfaction will be maintained.

Implementation

The more accountability and information disclosure regarding services increases, the clearer it will provide opportunities to create good digital governance and have an impact on increasing people's satisfaction with the public services provided.

5. CONCLUSION

From the results of the study, the existing conclusion, namely that accountability and information disclosure partially affect community satisfaction in Medan City and affect digital governance. Simultaneously, accountability and information disclosure affect community satisfaction in Medan City through digital governance variables as intervening variables.

References

- 1) Alexandra, Carla, et al. (2023). Cyber-physical systems in water management and governance. *Journal Current Opinion in Environmental Sustainability*, 62, 1–11.
- 2) Budiarmo, et al. (2021). How do design parameters of firm governance affect collaboration process dimensions in professional service firm? *Journal Heliyon*, 7, e08431. <https://doi.org/10.1016/j.heliyon.2021.e08431>
- 3) Cao, Shoufeng, et al. (2022). A blockchain-based multisignature approach for supply chain governance: A use case from the Australian beef industry. *Journal Blockchain: Research and Applications*, 3, 100091. <https://doi.org/10.1016/j.bcra.2022.100091>
- 4) Chung, Choong Sik, Choi, Hanbyul and Cho, Y. (2022). Analysis of Digital Governance Transition in South Korea: Focusing on the Leadership of the President for Government Innovation. *Journal of Open Innovation: Technology, Market, and Complexity*, 8(2), 1–28. <https://doi.org/10.3390/joitmc8010002>
- 5) Cordery, Carolyn J., et al. (2023). NGOs' performance, governance, and accountability in the era of digital transformation. *Journal British Accounting Review*, 55, 101239. <https://doi.org/10.1016/j.bar.2023.101239>
- 6) Cornips, Leila, et al. (2023). Co-production as a strategy for enhanced equal representation in public service delivery: The case of Rotterdam. *Journal Cities*, 141, 104480. <https://doi.org/10.1016/j.cities.2023.104480>
- 7) El-Haddadeh, Ramzi, et al. (2019). Examining citizens' perceived value of internet of things technologies in facilitating public sector services engagement. *Journal Government Information Quarterly*, 36, 310–320. <https://doi.org/10.1016/j.giq.2018.09.009>
- 8) Hamzah, Muhammad Iskandar, et al. (2023). Switching intention, WOM and quality of public transport services: A case of the Kuala Lumpur conurbation. *Multimodal Transportation*, 2, 100082. <https://doi.org/10.1016/j.multra.2023.100082>
- 9) Hanisch, Marvin, et al. (2023). Digital governance: A conceptual framework and research agenda. *Journal of Business Research*, 162, 113777. <https://doi.org/10.1016/j.jbusres.2023.113777>
- 10) Hirschhorn, Fabio, et al. (2019). Public transport regimes and mobility as a service: Governance approaches in Amsterdam, Birmingham, and Helsinki. *Journal Transportation Research Part A: Policy and Practice*, 130, 178–191. <https://doi.org/10.1016/j.tra.2019.09.016>
- 11) Irani, Zahir, et al. (2023). The impact of legacy systems on digital transformation in European public administration: Lesson learned from a multi case analysis. *Journal Government Information Quarterly*, 40. <https://doi.org/10.1016/j.giq.2022.101784>
- 12) Kornysheva, Elena, Boutal, Laurent and Benramdane, M. K. (2023). Digital Business Ecosystems: Organizational Model, Roles, and Governance Towards Flexibility. *Journal Procedia Computer Science*, 225, 4621–4630. <https://doi.org/10.1016/j.procs.2023.10.460>

- 13) Kosec, Katrina and Wantchekon, L. (2020). Can information improve rural governance and service delivery? *Journal World Development*, 125, 104376. <https://doi.org/10.1016/j.worlddev.2018.07.017>
- 14) Kuziemski, Maciej and Misuraca, G. (2020). AI governance in the public sector: Three tales from the frontiers of automated decision-making in democratic settings. *Journal Telecommunications Policy*, 44, 101976. <https://doi.org/10.1016/j.telpol.2020.101976>
- 15) Lafioune, Nawel, et al. (2023). Digital transformation in municipalities for the planning, delivery, use and management of infrastructure assets: Strategic and organizational framework. *Sustainable Futures*, 6, 100119. <https://doi.org/10.1016/j.sfr.2023.100119>
- 16) Li, Dongxue, Zhao, S., & Wang, X. (2022). Spatial governance for COVID-19 prevention and control in China's development zones. *Journal Cities*, 131, 104028. <https://doi.org/10.1016/j.cities.2022.104028>
- 17) Ly, Bora and Ly, R. (2023). Emerging trends in social media for E-governance and citizen engagement: A case study of telegram in Cambodia. *Journal Computers in Human Behavior Reports*, 12, 100347. <https://doi.org/10.1016/j.chbr.2023.100347>
- 18) Nguyen, Thi Minh Phuong and Davidson, K. (2023). Institutionalising 100 Resilient Cities governance experiments in cities with no metropolitan government: A case study of Living Melbourne (Resilient Melbourne), Australia. *Journal Cities*, 141, 104500. <https://doi.org/10.1016/j.cities.2023.104500>
- 19) Nookhao, Saowakhon and Kiattisin, S. (2023). Achieving a successful e-government: Determinants of behavioral intention from Thai citizens' perspective. *Heliyon*, 9, e18944. <https://doi.org/10.1016/j.heliyon.2023.e18944>
- 20) Paparova, Dragana, et al. (2023). Data governance spaces: The case of a national digital service for personal health data. *Information and Organization*, 33, 100451. <https://doi.org/10.1016/j.infoandorg.2023.100451>
- 21) Pontones-Rosa, Carolina, Pérez-Morote, Rosario and Santos-Peñalver, J. F. (2021). ICT-based public policies and depopulation in hollowed-out Spain: A survey analysis on the digital divide and citizen satisfaction. *Journal Technological Forecasting and Social Change*, 169, 120811. <https://doi.org/10.1016/j.techfore.2021.120811>
- 22) Rantala, Salla, et al. (2020). Governance of forests and governance of forest information: Interlinkages in the age of open and digital data. *Journal Forest Policy and Economics*, 113, 102123. <https://doi.org/10.1016/j.forpol.2020.102123>
- 23) Ristikari, Tiina and Virtanen, P. (2023). *Journal of Open Innovation : Technology , Market , and Complexity Towards AI-governance in psychosocial care : A systematic literature review analysis.* *Journal of Open Innovation: Technology, Market, and Complexity*, 9, 100157.
- 24) Scupola, Ada and Mergel, I. (2022). Co-production in digital transformation of public administration and public value creation: The case of Denmark. *Journal Government Information Quarterly*, 39, 101650. <https://doi.org/10.1016/j.giq.2021.101650>
- 25) Simmonds, Hamish, et al. (2021). Mechanisms of service ecosystem emergence: Exploring the case of public sector digital transformation. *Journal of Business Research*, 137, 100–115. <https://doi.org/10.1016/j.jbusres.2021.08.008>
- 26) Slotsvik, Tone Njølstad, Gould, Kenneth Arne Pettersen and Stene, L. K. (2023). Contributions and limitations of relational governance towards the reliability of publicly procured air ambulance services. *Journal Safety Science*, 164, 106167. <https://doi.org/10.1016/j.ssci.2023.106167>
- 27) Song, Kai, et al. (2023). Urban governance: A review of intellectual structure and topic evolution. *Journal Urban Governance*, 3, 169–185. <https://doi.org/10.1016/j.ugj.2023.06.001>
- 28) Stroppe, A. K. (2023). Left behind in a public services wasteland? On the accessibility of public services and political trust. *Journal Political Geography*, 105, 102905. <https://doi.org/10.1016/j.polgeo.2023.102905>

- 29) Sucupira Furtado, Lara, et al. (2023). A framework for Digital Transformation towards Smart Governance: using big data tools to target SDGs in Ceará, Brazil. *Journal of Urban Management*, 12, 74–87. <https://doi.org/10.1016/j.jum.2023.01.003>
- 30) Sunio, Varsolo, et al. (2023). Generalization of digital innovation for financial inclusion by means of market creation through regulation and governance. *Journal Global Transitions*, 5, 29–39. <https://doi.org/10.1016/j.glt.2023.04.001>
- 31) Tangi, Luca, et al. (2020). Mandatory provisioning of digital public services as a feasible service delivery strategy: Evidence from Italian local governments. *Journal Government Information Quarterly*, 38, 1–11. <https://doi.org/10.1016/j.giq.2020.101543>
- 32) Ullah, Fahim, et al. (2021). Risk management in sustainable smart cities governance: A TOE framework. *Journal Technological Forecasting and Social Change*, 167, 120743. <https://doi.org/10.1016/j.techfore.2021.120743>
- 33) Zhang, Jun and Mora, L. (2023). Nothing but symbolic: Chinese new authoritarianism, smart government, and the challenge of multi-level governance. *Journal Government Information Quarterly*, 40, 101880. <https://doi.org/10.1016/j.giq.2023.101880>
- 34) Zou, Qi, et al. (2023). Vision and reality of e-government for governance improvement: Evidence from global cross-country panel data. *Journal Technological Forecasting and Social Change*, 194, 122667. <https://doi.org/10.1016/j.techfore.2023.122667>
- 35) Zuiderwijk, Anneke, Chen, Yu Che and Salem, F. (2021). Implications of the use of artificial intelligence in public governance: A systematic literature review and a research agenda. *Journal Government Information Quarterly*, 38, 101577. <https://doi.org/10.1016/j.giq.2021.101577>